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ABSTRACT

After a critical review of research which deals with various aspects of aspirations, expectations and educational attainment, this study attempts to determine the social psychological antecedents of black educational levels of aspiration. The study is based upon data colledted from black sophomore students at a large, predominantly white university in the southeast. Variables considered include sex of respondents, grade point average, socioeconomic status, contact with whites, and subjective ability comparisons. Measures of educational aspirations and expectations are assessed. Multiple regression techniques are used in analyzing these variables. Findings indicate that the aspirations of black students are closely related to their expectations and suggest that social background plays an important role in the formation of aspirations and expectations for post-baccalaureate schooling, but not for the formation of grade point average expectations. It is concluded that black students do not link grade point average to schooling as white students do because of values acquired in a distinctive subculture. Implications of these findings for educational policy are discussed. (Author/EB)

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Social and Psychological Antecedents of Black Student Aspirations

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Researchers and theorists interested in educational attainment have for some time attempted to assess the role of level of aspiration. Beginning with Rosen's (1959) formulation of what is termed the "achievement syndrome," level of educational aspiration has received an abundance of research attention. As conceptualized by Rosen this "achievement syndrome" has as one of its components educational and vocational aspiration levels. The importance of these specific aspirations lies in the theoretical premise that they act to set the range of limits of what may be attained (Rosen, 1959). Whereas this would be an important enough consideration for the generation of research, Rosen's findings (1956, 1959) of significant intergroup differences in aspiration levels served as further impetus for investigation of these aspiration levels. And, indeed, while educational and vocational level of aspiration as a rule has been a prevalent concern, some energies have been directed toward validating and explaining apparent intergroup differences--principally racial differences. Notably, however, both these research traditions have carried with them troublesome ommissions, particularly in view of the underlying concern with attainment, and the presumption of the explanatory power to be found in level of aspiration.

One theoretically important aspect of the level of aspiration is the distinction made by Lewin, Dembo, Festinger and Sears (1944) between a wish or desire component (aspiration) and an expectation or actual plans component (expectation). This distinction quite clearly rests on the assumption that individuals may respond to inquiries about their level of aspiration in some area at one of two levels: (1) they may

respond in terms of what they would really like to accomplish, or (2) they may respond in terms of what they really expect to accomplish. These two components of the level of aspiration, aspiration and expectation, are not only conceptually quite unlike each other, but may also bear substantially different relationships to an attainment process. Since aspirations may be viewed as a "wished for" or fantasy level of attainment, its relationship to attainment may not be limited by the availability of educational opportunities. Expectations, however, presumably reflect the individual's perception of those opportunities available to him in the realization of that level of attainment. Consequently, a failure to consider both aspirations and expectations would, and has, prevented researchers from determining the role of perceived opportunity on educational attainment. Still the distinction has frequently failed to find its way into the research of educational aspiration levels (Brookover, Erickson and Joiner, 1967), and ironically even where this has not been the case, the usage has been less than systematic (Prohansky and Newton, 1968).

Undoubtedly, one reason why researchers have failed to maintain the conceptual distinction between aspirations and expectations is that when the distinction has been made, the correlation between them has been significant (Brookover, et al., 1975). However, a possible reason for the large correlation between aspirations and expectations has been the failure to specify the nature of the dependent variable, educational attainment. Most studies have used the number years of school students aspire for or expect to complete as the measure of educational ambition. And, those studies that have used other measures of educational ambition, such as grade aspiration or expectation have focused on aspirations or expectations for only one

school term (e.g., a semester or a quarter); they have not focused on grade aspirations or expectations for one's high school or college career (Coombs and Davies, 1965; Biggs and Tinsley, 1970).

One consequence of this is that the conceptual distinction between aspirations and expectations is blurred. That is, if one re-casts the distinction between aspirations and expectations in terms of their source, then aspirations would be the result of internal cues, while expectations would be the result of external informational cues.[1] However, since aspirations are influenced by external events, as expectations are influenced by internal predispositions, their difference would lie in the relative mix of internal and external cues.

Several important implications follow from this way of viewing aspirations and expectations. In the first place, aspirations can differ from each other in the extent to which they rely on internal cues relative to external cues. Some aspirations may be almost totally the result of internal cues while other aspirations may result from relatively more external cues. Expectations may similarly differ from each other. Therefore, one might expect that expectations in a given area that rely on relatively fewer external informational cues would be less differentiated from aspirations than an expectation in another area that relied on relatively more external cues. Finally, one might expect aspirations and expectations to differ as a result of the "certainty" of the external informational cues. For example, external, informational cues based on past events may well be held to be more certain than external cues about some future event.

In these terms, then, the distinction between grades for a single term and grade point average for several terms is that the external cues used in arriving at aspirations and expectations for single term grade involve the

present and the future; grade point average external cues, on the other hand involve the past and the present. Thus, since external cues about the past may be more certain than those about the future, one would expect grade point average to be more influenced by external cues than grades for a term. In other words, expectations for term grades might be more closely related to aspirations for term grades than expectations for grade point average is related to aspirations for grade point average.

Moreover, measures of ambition based on number of years of schooling aspired for or expected are also dependent on future-oriented external cues. Thus, both of these measures of educational ambition may be more reflective of internal cues than the conceptual distinction between aspirations and expectations would warrant. Consequently, an observed correlation between aspiration and expectation might be spuriously high.

The research directed toward validating and explicating racial differences in levels of aspiration has carried with it omissions similar to those briefly outlined. As a consequence, the research on Black levels of aspiration has functioned only to produce more questions than answers (Vander Zanden, 1974). In the first place, most studies of Black educational attainment have been limited to comparing the educational aspirations of Blacks with those of whites (see for example, Cosby, 1971; Carter, Little and Barabasz, 1972; and Hall, 1975). These investigations have not sought to empirically assess the social psychological antecedents of these aspirations. In reviewing studies within this category, social scientists have found it difficult to make any generalizations, aside from pointing out that findings are for the most part in stark contrast to each other. Studies which seek to analyze Black student levels of aspiration by this comparative method report that Blacks have both lower and higher aspirations than whites, as

well as no significant differences (see Prohansky and Newton, 1968 for a review). While this incongruity of findings is somewhat attributable to the questionable practice of reviewing studies of both educational and vocational levels of aspiration in the same interpretative context, correction of this oversight is only of minimal assistance in its reduction. Kandel (1971) reviewing a limited number of studies of Black educational levels of aspiration in the same interpretative context, correction of this oversight is only of minimal assistance in its reduction. Kandel (1971) reviewing a limited number of studies of Black educational levels of aspiration comes away with the observation that "Black adolescents are consistently found to have aspirations which are as high or higher than those of whites." Ironically, this consistent finding has added little weight to the view expressed here of the need for the investigation and categorization of the antecedents of these levels of aspiration.

Further, because of the failure of these investigations to distinguish in a systematic fashion between aspirations and expectations, understanding the role of perceived opportunity on Black educational attainment has been precluded. Kandel (1971), in attempting to explain the finding of higher levels of aspiration for Blacks relative to whites within some theoretical framework, concludes as others have, (see Katz, 1969) that these levels of aspiration are a psychologically defensive response. That is, Kandel first concludes that these aspirations are unrealistic in view of the more numerous obstacles confronting Black adolescents with regard to educational attainment, and suggests that they respond as they do in an effort to overcome their feelings of racial inferiority. However, given the failure of researchers to adequately specify the sources of the aspirations/expectations, these conclusions should be viewed as tentative.

Given these considerations, the present study was undertaken as an attempt to determine the social psychological antecedents of Black educational levels of aspiration, placing major emphasis upon the theoretical and operational distinctions outlined above.

From the literature several variables have been found to be important antecedents of educational aspirations and expectations. Of these, the most consistently important has been the social class of the parents and sex (Kerckhoff and Campbell, 1977). Further, since the foregoing analysis has posited the necessity of distinguishing between grade point average aspirations and expectations and other measures of educational aspirations and expectations, then to the extent that actual grade point average is an external informational cue, it can be expected to be related to grade point average aspirations and expectations.

Additionally, Pettigrew (1967) speculates that many of the educational benefits of school desegregation may result from the increased opportunity Black students have to compare themselves to whites (p. 287). In the same vein, Turner (1955) holds that one important function of comparison with others is that it provides the opportunity to acquire the values and norms of groups to which the individual aspires to belong. It has also been noted that such comparisons of Blacks to whites may serve to lower or make more realistic unrealistically high aspirations (Pettigrew, 1967, p. 289). And, although this conceptualization of typically high Black aspirations has been questioned (Harris and Stokes, 1978), it too points out the importance of comparisons with others. Thus, measures of contact with whites, academic ability measures with Blacks and whites, and their interactions, may be important antecedents of Black educational aspirations and expectations.

Methods

Data. This study is based upon data collected from Black students who had just entered their sophomore year at a large, predominantly white university in the southeast. Data collection began in the early fall and was completed by the end of that session of the academic year. All Black students in attendance who had entered the university three or four quarters prior to the study were mailed questionnaires designed to gather information relating to educational and social experiences. The names and addresses of these students were provided by the university registrar along with other academic data such as grade point averages and classification. Three additional follow-ups yielded a response rate of 47%. The larger majority of Black students at this particular university participate in a special program for incoming disadvantaged students during their first year. Students participating in this program attend most of their classes during that initial year only with students similarly classified. These students are also tested in a fashion which is different from the general testing method at that particular and most other universities in that they are allowed three attempts at passing. Generally the group designated as disadvantaged is predominantly Black. Consequently, during the first year at least, a large number of Black students take their classes with only other Black students or at least very few white students.

Sex of Respondent. Respondents freely indicated via the questionnaire a number of demographic characteristics of which sex was one.

Grade Point Average. The grade point averages of Black students who had initially entered the university three to four quarters before the study and were still in attendance at the time of the study were provided by the university registrar's office.

Socioeconomic Status. To measure socioeconomic status (SES), respondents were asked to indicate both their Father's occupation and highest level of education attained and also their Mother's occupation and highest level of education. Additionally respondents provided brief descriptions of each of their parents occupations. The information on occupations was then coded using an occupation prestige rating scale with both father and mother occupation rated separately. The information on levels of attained education was, where necessary, changed to numerical data (e.g. Ph.D= 20, M.A.= 18, High School graduate = 12, etc.) and used in that form for analysis. Hence four separate components of socioeconomic status were employed: Father's Occupation, Father's Education, Mother's Occupation and Mother's Education.

Contact with Whites. This variable has to do with the degree to which a respondent had specific types of contact with whites before coming to the university. This then is a measure of earlier and not present contact with whites. The attempt was made to gather information with regard to the racial context of the respondents high school (i.e., the number of white students relative to Black students), the racial context of the classes the respondents generally was a member of, and the racial context of the activities (both school and non-school related) the respondent generally participated in. Hence there are four measurable components of the variable contact with whites: High School Racial Environment, Classroom Racial Environment, Degree of Participation in School Activities with Whites (School Activities) and the Degree of Participation in Non-School Related Activities (Other Activities). These components were measured by respondents answers to items on the questionnaire. The item which measured high school racial environment asked students whether

"the high school you attended" contained "mostly white students," "mostly "Black students," or "about half and half." The item for classroom racial environment was worded similarly. The item which measured individuals participation in school related activities with whites first gave respondents a list of a wide range of possible school activities (e.g., high school band concerts, track meets, newspaper staff, glee club, Future Nurses, basketball games, etc.). From this list respondents were asked to pick four which they generally participated in. For each of the four a question followed which asked students to indicate the racial composition of the group generally in attendance, that is "mostly white students," "mostly Black students," or "about half and half." The items concerned with non-school related activities (Other Activities) were constructed similarly beginning with a list of a wide range of non-school related activities (e.g., shopping, card games, sandlot games, home visits, just hanging around together, etc.). From these respondents chose four which they generally participated in. Again for each of the four a question followed concerned with group racial composition.

Subjective Ability Comparisons. This variable is an attampt to consider and measure the consequences of the availability of two potentially separate groups by which Black students might in a subjective or phenomenological sense compare their academic abilities or accomplishments. This is accomplished through measurement of respondents self-assessments of their own academic standing relative to white students and relative to Black students separately. Two measures were utilized to consider the "students at the university you now attend, and thinking about your grade point average, where do you think you now stand in comparison to white students at your university." The possible responses included:

Higher, Slightly Higher, Same, Slightly Lower and Lower. The second item was identical in wording and possible responses but was asked with reference to Black students.

Educational Aspirations and Expectations. These Aspirations and Expectations were measured by use of two indexes each of which was composed of two actual questionnaire items. Aspirations were indexed by first asking "Would you like to receive some education beyond the Bachelor's degree?" Respondents replying yes then answered the question "How many years beyond the Bachelor's degree would you like to go?" Where necessary responses were changed to numerical notation (M.A. = 2, Ph.D = 4). Expectations were indexed by first asking "Do you expect to receive some education beyond the Bachelor's degree?" Respondents replying yes then answered the question "How many years beyond the Bachelor's degree do you expect to go?" Again, where necessary responses were changed to numerical notation (M.A. = 2, Ph.D. = 4).

Grade Point Average Aspirations and Expectations or Aspirations and Expectations for Impact of Education. In order to index this variable a modification of Cantril's (1963) method for the study of aspirations was utilized. Cantril's (1963) original methodology provided individuals with a ladder on which they were to indicate where they thought they stood at the time in terms of the best possible life for them (where the top of the ladder is set as the best) and where they thought they would stand five years in the future. For use in this context rather than present a ladder or ladders two vertically straight lines, 12 cm. in length, were provided. Below the first line respondents were asked to regard the top of the line as the highest possible grade point average and the bottom as the lowest. Respondents were than asked to mark the

point on the line where they would like their grade point average to be at graduation. This, of course, is the aspiration aspect of the measure. Below the second vertical line the instructions were similar except that respondents were asked to mark the point on the line where they actually expected their grade point average to be at graduation. This is the expectation aspect of the measure. The lines themselves contained no reference points (except for highest and lowest points) so that respondents had to make judgments themselves of what was average, moderately high or low and so on. It should be noted that this method provides a measure of an overall scholastic or grade aspiration/expectation rather than a measure of aspiration/expectation for grades in particular classes or during a particular session of an academic year.

The data was analyzed using multiple regression techniques; this allowed for statistical control of variables as well as the relative impact of different variables to be assessed.

Results

In order to determine if, as the literature suggests, aspirations are closely related to expectations, the mean of the correlations between GPAASP and GPAEX, and between SCHOOLASP and SCHOOLEX (see Table 1) was found. This mean correlation (.639) was significant, $t(2) = 7.47$, $p < .001$. This suggests that GPA and SCHOOL are closely related. However, another question is whether or not the relationship between aspirations and expectations is conditional upon the particular measure of educational ambition being used; GPA or SCHOOL.

In order to answer this question, the difference between the correlations of GPAASP and GPAEX, and between SCHOOLASP and SCHOOLEX was found (.285). This difference was significant, $t(3) = 3.17$, $p < .01$,

indicating that the degree of the relationship between aspirations and expectations is dependent on the particular measure of educational ambition being used.

Two further questions suggested by these findings are first, since aspirations are significantly related to expectations of what importance is the finding that the extent of the relationship depends on whether or not GPA or SCHOOL is being used? Second, why is the relationship between GPAASP and GPAEX less than that of SCHOOLASP and SCHOOLEX?

For GPAASP the mean (13:45) is less than that of GPAEX (36.67), indicating that the aspiration for a high grade point average was greater than the expectation for a high gradepoint average. The standard deviation for GPAASP (13.83) was less than that for GPAEX (21.20), indicating more variability for GPAEX. Similarly, the mean for SCHOOLASP (3.03) was higher than that for SCHOOLEX (2.54). However, the standard deviation for SCHOOLASP and SCHOOLEX (1.23 and 1.25, respectively) suggests much less variability in SCHOOLEX relative to SCHOOLASP than GPAEX relative to GPAASP. Therefore, it would appear that compared to GPAEX, SCHOOLEX is less concrete, and possibly as subject to "wishing" as is SCHOOLASP.

In order to further test the relationship between GPA versus SCHOOL aspirations and expectations, each of these four variables was used as the dependent variable in multiple regression analysis. Because of the theoretical importance of social class, the SES variables (i.e., mother's and father's education and occupation) were entered first. Then, SES, actual grade point average (GPA), contact with whites (CONTACT), and comparison of student's own abilities to other Blacks (BLCOMPARE) and to whites (WHCOMPARE). Specifically, the hierarchical inclusion of the independent variables will test whether or not the variance explained

by a given independent variable is significant controlling for the effects of variables previously entered. Moreover, the comparison of the net effects of the independent variables for GPA aspirations/expectations and SCHOOL aspirations/expectations will permit inferences to be made about the nature of GPA and SCHOOL.

GPAASP and GPAEX

From Table 2 it appears that none of the independent variables predict GPAASP, although the measures of SES approach significance ($F(4,78) = 2.31$, $p < .08$).[3]

For GPAEX, however, SES has a negligible effect ($F < 1$) while two independent variable are significantly predictive, GPA ($F(1, 75) = 5.34$, $p < .05$) and WHCOMPARE ($F(1, 72) = 10.60$, $p < .01$). It should be noted that neither CONTACT nor the interaction of CONTACT and the comparison variables (BLCOMPARE and WHCOMPARE) are significant. This suggests that regardless of the actual contact Blacks have with Whites, it is the comparison Black students make with white students that is important. It should also be noted that while the beta for GPA is negative (indicating that the higher the actual grade point average, the lower GPAEX)[4], the beta for WHICOMPARE is positive (indicating that the lower Blacks assess their ability to whites, the lower will be their grade point averages).

SCHOOLASP and SCHOOLEX

From Table 3, only one of the independent variables predicts SCHOOLASP and SCHOOLEX, WHCOMPARE ($F(1, 72) = 6.874$, $p < .05$; and $F(1, 72) = 6.221$, $p < .05$, respectively). For SCHOOLASP and SCHOOLEX, the increase in the explained variance was 7.6% and 6.8%, respectively. Thus, it appears that the effect of WHCOMPARE was slightly greater for SCHOOLASP than for SCHOOLEX; for both, however, the lower Blacks assess their

ability relative to whites, then, the lower are their aspirations and expectations for years of school beyond a bachelor's degree.

It should also be noted that although the SES measures only approach significance, ($F(4,78) = 2.123$ and 2.336, respectively, $p < .10$), they do explain 9.8% and 10.7% of the variance for SCHOOLASP and SCHOOLEX, respectively. Moreover, a comparison of the beta's for the SES variables when first entered in the regression (Table 2) and after WHCOMPARE had been entered (see Table 3) suggests the importance of the SES variables as mediators of SCHOOLASP and SCHOOLEX. That is, the increase in the SES betas imply that part of the contribution of WHCOMPARE to the explained variance is due to the effect of the SES variables.

In summary, it appears aspirations are closely related to expectations; the extent of the relationship depends on the particular aspiration and expectation. The correlation between GPAASP and GPAEX is significantly less than the correlation between SCHOOLASP and SCHOOLEX.

Second, although none of the test variables were found to be significantly related to GPAASP, WHCOMPARE was significantly related to GPAEX, SCHOOLASP, and SCHOOLEX. While the unique contribution of WHCOMPARE was greatest for GPAEX, this seems to be due to the fact that the unique contribution of the SES measures was the least for GPAEX. Further, this finding suggests that social background plays an important role in the formation of aspirations and expectations for post-baccalaureate schooling, but not for the formation of grade point average expectations. Thus, the distinction made between grade point average and years of schooling as measures of educational ambition seems well founded. Grade point average does seem to reflect an external evaluation of the individual, while the ambition for post-baccalaureate schooling reflects the

individual's evaluation of the social appropriateness of this schooling. This conclusion is also supported by the finding that actual grade point average, and indeed, aspired for and expected grade point average, are not significantly related to either SCHOOLASP or SCHOOLEX.

Finally, it should be noted that neither BLCOMPARE, CONTACT, nor their interactions (with WHCOMPARE) were significant. Thus, it appears that despite the fact that these students had had most of their face-to-face interaction with other Black students, white students comprised their primary academic comparison group.

Discussion

These results are interpreted as providing support for the notion that the significant difference found between grade point average and post-baccalaureate schooling resulted from grade point average being based upon more certain external informational cues, while schooling was based upon less certain future-oriented external cues.

Additionally, Banks, McQuater, and Hubbard (1978) have suggested that because Blacks acquire their tastes, values and preferences within a distinctive subcultural context, it is possible that those tasks valued by the dominant society will not have the same motivating force for Blacks as they do for whites (p. 387). In this light, the finding that grade point average aspirations and expectations are not significantly related to school aspirations and expectations, may indicate that Black students may not view grade point average and schooling in the same way as white students. That is, Black students may not link grade point average to schooling because of values acquired within a distinctive subculture:

The finding that actual grade point average was not significantly related to either school aspirations or school expectations supports this view. Banks, Stilt, Curtis, and McQuater (1977) found that "certain cognitive processes. . . mediate the impact of any socially evaluative information upon the individual, and appear in particular to provide a buffer for Black persons against the negative feedback of white sources" (p. 462). Grade point average then, as direct feedback from whites on how well a Black student is doing, amy be simply "discounted."

At the same time, however, Black students must be expected to require some feedback. Indeed, it seems plausible to think that the more direct feedback from whites is discounted, the greater will be the need for other feedback. The comparison of abilities to white students by Black students may provide that indirect feedback. Not only would such comparisons be relevant, but they would also be internally mediated by the student himself.

One implication of this argument, in light of the findings, is that ability comparisons with other Black students are not considered relevant feedback. While on the one hand this may suggest intragroup derogation, it may be more indicative of intergroup derogation. That is, since Blacks have been and continue to be excluded from predominantly white academic institutions, white evaluations are, in fact, more relevant to educational ambition than are Black evaluation. (Ogbu, 1978). Moreover, it is also possible that since direct feedback from Blacks is not discounted, the indirect feedback embodied in ability comparisons are not necessary.

The preceding analysis suggests at least policy implication. Since grades are an important prerequisite for additional schooling, if Blacks

are to achieve that schooling, then it is desirable that the grades become linked to future schooling. One approach would be to attempt to make the grading process as objective as possible for Black students. This would entail not only the use of "blind grading" and the utilization of materials reflective of Black interests and values, but also greater involvement of Black teachers and professionals with Black students. In addition, steps should be taken to insure that Black students do not overrate the ability of white students relative to their ability.

Footnotes

1. Note that this usage of external and internal does not have the same meaning as external and internal locus of control.

2. GPAASP was measured from the top down, while GPAEX was measured from the bottom up.

3. The homogeneity of the sample contributed to the finding of non-significant SES effects.

Table 1: Correlations[a], Means, and Standard Deviations

		1	2	3	4	5	6	7	8	9	10	11	12	13
GPAASP	1	--												
GPAEX	2	496	--											
SCHOOLASP	3	-009	007	--										
SCHOOLEX	4	084	091	781	--									
FOC	5	-053	-107	-204	-166	--								
MOC	6	307	075	184	235	156	--							
FED	7	-018	-091	-185	-159	459	021	--						
MED	8	-016	-056	-080	-102	008	-049	430	--					
SEX	9	116	185	-016	-050	-141	-208	-160	-106	--				
GPA	10	241	-281	091	-053	126	-098	175	078	028	--			
CONTACT	11	-176	-139	061	154	010	010	122	133	-112	061	--		
BLCOMPARE	12	280	367	-032	-041	-113	188	-111	023	164	-528	-222	--	
WHCOMPARE	13	206	504	131	150	-004	086	-014	004	213	-477	-124	637	--
$\bar{m}$		13.449	36.667	3.026	2.539	21.949	24.564	12.513	12.590	.641	2.392	2.359	2.667	3.205
sd		13.835	21.203	1.225	1.253	6.692	8.035	2.910	2.692	.486	.599	.803	.898	1.031

[a]Decimal points are omitted from correlations.

*p < .10
**p < .01
***p < .001

Table 2a: Hierarchical Regression Analysis of GPAASP and GPAEX

	GPAASP							GPAEX						
	beta	cum R^2	F	df	I	F_I	F_I(df)	beta	cum R^2	F	df	I	F_I	F_I(df)
SES[a]	--	.106	2.308	4,78	.106	2.308*	4,78	--	.023	.460	4,78	.023	.460	4,78
FOC	-.121	--	--	--	--	--	--	-.110	--	--	--	--	--	--
MOC	.325	--	--	--	--	--	--	.091	--	--	--	--	--	--
FED	.037	--	--	--	--	--	--	-.025	--	--	--	--	--	--
MED	-.015	--	--	--	--	--	--	-.040	--	--	--	--	--	--
SEX	.184	.137	2.449	5,77	.031	2.736	1,76	.195	.058	.953	5,77	.035	2.824	1,76
GPA	-.217	.182	2.821	6,76	.045	4.126	1,75	-.272	.129	1.870	6,76	.062	5.339**	1,75
CONTACT	-.159	.207	2.791	7,75	.025	2.333	1,74	-.095	.137	1.707	7,75	.008	.686	1,74
BLCOMPARE	.065	.209	2.447	8,74	.002	.185	1,73	.243	.174	1.943	8,74	.037	3.270	1,73
WHCOMPARE	-.001	.209	2.146	9,73	.000	.000	1,72	.447	.280	3.159	9,73	.106	10.600***	1,72
TWO-WAY[a]	--	.273	2.195	13,69	.064	2.025	3,69	--	.297	2.463	13,69	.017	.556	3,69
CxB	(-.077)	--	--	--	--	--	--	(.252)	--	--	--	--	--	--
CxW	(1.311)	--	--	--	--	--	--	(-.008)	--	--	--	--	--	--
BxW	(-.096)	--	--	--	--	--	--	(.733)	--	--	--	--	--	--
THREE-WAY	--	.315	2.444	14,68	.042	3.679	1,60	--	.317	2.459	14,68	.020	1.757	1,60
CxBxW	(4.466)	--	--	--	--	--	--	(3.061)	--	--	--	--	--	--
$\bar{m}$			13.449							36.667				
sd			13.835							21.203				

[a]These variables were entered simultaneously.

Note: Significance levels are for the regression (F) and for the increase in explained variance (F_I).

*p < .10

**p < .01

***p < .001

Table 2b: Hierarchical Regression Analysis of SCHOOLASP and SCHOOLEX

	SCHOOLASP							SCHOOLEX						
	beta	cum R^2	F	df	I	F_I	F_I(df)	beta	cum R^2	F	df	I	F_I	F_I(df)
SES[a]	--	.098	2.123	4,78	.098	2.123	4,78	--	.107	2.336	4,78	.107	2.336*	4,78
FOC	-.198	--	--	--	--	--	--	-.183	--	--	--	--	--	--
MOC	.215	--	--	--	--	--	--	.262	--	--	--	--	--	--
FED	-.086	--	--	--	--	--	--	-.053	--	--	--	--	--	--
MED	-.031	--	--	--	--	--	--	-.065	--	--	--	--	--	--
SEX	-.018	.098	1.682	5,77	.000	0.000	1,76	-.040	-.108	1.874	5,77	.001	.085	1,76
GPA	.163	.124	1.790	6,76	.026	2.226	1,75	.012	.109	1.544	6,76	.001	.083	1,75
CONTACT	.068	.128	1.576	7,75	.004	.339	1,74	.170	.136	1.692	7,75	.027	2.313	1,74
BLCOMPARE	-.013	.128	1.362	8,74	.000	0.000	1,73	-.117	.145	1.565	8,74	.009	.768	1,73
WHCOMPARE	.377	.204	2.082	9,73	.076	6.874**	1,72	.358	.213	2.197	9,73	.068	6.221**	1,72
TWO-WAY[a]														
CxB	(-.509)	--	--	--	--	--	--	(-.383)	--	--	--	--	--	--
CxW	(1.236)	--	--	--	--	--	--	(1.219)	--	--	--	--	--	--
BxW	(-.256)	--	--	--	--	--	--	(-.326)	--	--	--	--	--	--
THREE-WAY	--	.254	1.808	14,68	.000	0.000	1,60	--	.268	1.945	14,68	.001	.082	1,60
CxBxW	(-.043)	--	--	--	--	--	--	(-.737)	--	--	--	--	--	--
$\bar{m}$			3.026							2.539				
sd			1.225							1.253				

[a] These variables were entered simultaneously.

Note: Significance levels are for the regression (f) and for the increase in explained variance (F_I).

*p < .10
**p < .01
***p < .001

Table 3: Betas, Unique Variance and Significance Levels for Last Step of Hierarchical Regression Analysis of SCHOOLASP and SCHOOLEX

		SCHOOLASP			SCHOOLEX		
		beta	R^2 unique	t	beta	R^2 unique	t
SES[a]		--	.098	--	--	.107	--
	FOC	-.237	.042	-2.279**	-.209	.028	-1.878**
	MOC	.236	.048	2.284**	.282	.070	2.599***
	FED	-.145	.008	-1.374*	-.100	.006	<1
	MED	-.036	.001	<1	-.066	.003	<1
SEX		-.074	.000	<1	-.056	.001	<1
GPA		.242	.025	2.335**	.030	.000	<1
CONTACT		.061	.004	<1	.144	.144	--
BLCOMPARE		-.205	.000	<1	-.299	.008	<1
WHCOMPARE		.377	.076	3.470***	.357	.068	3.179***
			.204	F(9, 73)= 6.874		.213	F(9, 73)= 6.221
	$\bar{m}$		3.026			2.539	
	sd		1.225			1.253	

[a]These variables were entered simultaneously.

*p < .10

**p < .05

***p < .011

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